

**MOSGATED DEVICE WITH ACCUMULATED  
CHANNEL REGION AND SCHOTTKY CONTACT**

**ABSTRACT OF THE INVENTION**

A MOSgated device has spaced vertical trenches lined with a gate oxide and filled with a P type polysilicon gate. The gate oxide extends along a vertical N<sup>-</sup> channel region disposed between an N<sup>+</sup> source region and an N<sup>-</sup> drift region. A Schottky barrier of aluminum is disposed adjacent the accumulation region extending along the trench to collect holes which are otherwise injected into the source region during voltage blocking. A common source or drain contact is connected to the N<sup>+</sup> region and to the Schottky contact. A two gate embodiment is disclosed in which separately energized gates are connected to alternatively located gate polysilicon volumes.